REMARKS

This amendment is responsive to the Final Office Action dated May 19, 2005. Applicant has made no claim amendments. Claims 1-53 are pending with claims 44-49 being withdrawn from consideration due to restriction.

Restriction Under 35 U.S.C. § 121

In the Final Office Action, the Examiner restricted claims 1-53 under 35 U.S.C. § 121 as follows:

Group I. Claims 1-43 and 50-53,

Group II. Claims 44-49

During a telephonic conversation with the Examiner on May 9, 2005, Applicants provisionally elected Group I with traverse. Applicants affirm this election with traverse.

Claim Rejection Under 35 U.S.C. § 102

In the Final Office Action, the Examiner rejected claims 1-43 and 50-53 under 35 U.S.C. 102(e) as being anticipated by Blair (USPN 6,778,495). Applicants respectfully traverse the rejection. Blair fails to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features.

Claims 1-19 and 51

With respect to claim 1, Blair fails to teach or suggest forwarding data packets from interface cards of a network device to a multi-link service card of the network device for sequencing. Similarly, with respect to claim 7, Blair fails to teach or suggest receiving a set of fragments from a plurality of links in one or more interface cards according to a multi-link protocol, and then sending the fragments to a multi-link service card for sequencing. With respect to claim 12, Blair fails to teach or suggest sequencing the data blocks in a multi-link service card of a network device.

In rejecting claims 1, 7 and 12, the Examiner stated that Blair teaches "data fragments are sent to the decoder coupled to multi-link interface" and cited the col. 4 ln. 23-col. 5 line 9. Thus,

the Examiner appears to equate decoder 63 of the Blair router with a multi-link service card. However, the Examiner's reasoning is flawed for many reasons.

First, contrary to the Examiner's assertion, "decoder 63" does not sequence multi-link data packets at all. To the contrary, as the portion of Blair cited by the Examiner clearly states, the decoder "segregates the received fragments from the received packets for the delay-sensitive flows (emphasis added)." In other words, decoder 63 merely separates those packets that are related to delay-sensitive flows from packet fragments for other flows. Segregation of packets for certain flows from fragments of other flows is unrelated to sequencing data packets. In fact, Blair makes clear that the delay-sensitive flows do not utilize sequence numbers at all (see, e.g, Blair at col. 3, ll. 18-20 stating "The delay sensitive packet or its fragment do not receive sequence numbers"). It appears the Examiner has confused the functions of decoder 31 with Blair's "fragment reassembler" that reorders packet fragments for non-time-sensitive flows.

Regardless, contrary to the Examiner's assertion, Blair makes no mention of forwarding multi-link data packets received from one type of card (i.e., an interface card) to another type of card (i.e., a multi-link service card) for sequencing the multi-link data packets. Blair is entirely silent with respect to a multi-link service card that is a separate card that that provides the functions of sequencing data packets received from the interface cards, as required by claims 1, 7, and 12. The portions of Blair, cited by the Examiner, show only the general proposition that data sent over multiple links are segmented by a decoder. Even assuming the Examiner meant to refer to the reassembly process 71, there is no teaching or suggestion that data packets received by an interface card are sent to a separate multi-link service card for sequencing. The cited portion of Blair merely states "[a] decoder, coupled to the link interfaces, segregates the received fragments from the received packets for the delay-sensitive flows." There is no teaching or suggestion to use a separate multi-link service card to perform sequencing of data packets.

The only other portion of Blair that describes decoder 63 states:

> The interfaces 61 supply the packets and fragments to a packet decoder 63. The decoder effectively de-interleaves the two different types of traffic from all of the links in the bundle. The decoder 63 looks at a portion of the header of each packet or fragment and distinguishes MLP fragments from PPP packets. In the receiver, the decoder 63 looks at the protocol ID in the header to distinguish between MLP and PPP packets or fragments. MLP is a subset of PPP. If the identifier identifies MLP, the packet goes to the MLP processing. All other packets go through the PPP processing.

> The decoder 63 supplies the different types of data units to two different de-encapsulators, to strip off the header and framing bits. The PPP de-encapsulation at 65, for example, recovers the IP packets of the delay-bounded traffic and supplies those packets to a subsequent IP routing element 67. For multilink (MLP) packets, the fragments recovered by the de-encapsulator 69 go through a reassembly operation 71, to reconstruct the original IP packets from the fragments. In both cases, the IP packets go to the routing function 67, which in turn relays the packets over the next subsequent link in their respective paths. Essentially, the element 67 looks at the IP header information and switches each packet out an appropriate port interface (col. 10, ll. 30-53).

Thus, in citing Blair, the Examiner has merely cited a reference that describes a router that de-interleaves and segments packets using a decoder. Decoder 31, as referred to by the Examiner, does not even perform a sequencing function. Further, Applicants' claims 1, 7 and 12 require the use of a separate use of a service card to perform the sequencing for data packets received by interface cards. Neither decoder 63 nor the reassembly operation 71 of Blair teach or suggest forwarding the data packets from the interface cards of the network device to a different multi-link service card of the network device for sequencing, as required by claim 1. Blair does not describe at all forwarding of data packets between different cards within a router for sequencing. The Examiner's conclusion that decoder 63 or reassembly operation 71 anticipates forwarding packets to a multi-link service card different from the interface card on which the packets were received, as required by claim 1, in entirely unsupported by the evidence of record.

For at least these reasons, with respect to claim 7, Blair fails to teach or suggest sending fragments to a multi-link service card for sequencing. With respect to claim 12, Blair fails to teach or suggest sequencing the data blocks in a multi-link service card of a network device.

With respect to claims 1, 7 and 12, the Examiner appears to entirely overlook the stated requirements of a multi-link service card. Alternatively, the Examiner incorrectly concludes that the decoder described by Blair is somehow a service card that performs sequencing. Either way, the Examiner has failed to establish a prima facie case for anticipation of a service card that sequences data packets received by other interface cards.

With respect to claims 5, 11, and 14, Blair again makes no mention of a multi-link service card to perform fragmentation, as required by these claims. Fragmentation is related to the transmission of packets over multiple links via fragmenting the data packets into fragments. As clearly illustrated in FIG. 3 of Blair, the decoder 63 cited by the Examiner as well as the

reassembly operation 71 operates on a router that **receives** multi-link data packets. Thus, the Examiner has entirely misinterpreted claims 5, 11 and 14, which relate to use of a multi-link service card to perform fragmentation of data packets for **transmission**. Blair does not teach or suggest fragmentation performed by a multi-link service card.

With respect to claim 17, Blair fails to disclose assembling data blocks in a **second** multi-link service card. Blair lacks any teaching of multi-link service cards, and thus does not disclose assembling data blocks in a second multi-link card, distinct from a first multi-link service card that performs sequencing. With respect to claim 17, the Examiner states that claim 17 is substantially similar to claim 4 and, therefore, rejected under the same basis. However, Applicants respectfully point out that claim 17 is completely different that claim 4. Claim 4 is directed to the sending of data packets to a destination device. Claim 17 is directed to assembling received the data blocks in a second multi-link service card. Thus, it appears that the Examiner has failed to examine the elements of claim 17. Moreover, Blair does not teach or suggest the use of a second multi-link serve card that to assemble data blocks after they have been sequenced by a first multi-link service card.

With respect to claim 51, Blair fails to teach or suggest a multi-link service card that is a removable card that may be inserted and removed from a network device. In rejecting claim 51, the Examiner referred to col. 11, ln. 12 – col. 12, ln. 65. However, this portion of Blair refers exclusively to interface cards (i.e., cards that provide interfaces to network links) and is entirely silent with respect to removable service cards:

> The **computer system** also includes a communication interface coupled to the bus. The communication interface provides a two-way data communication coupling to a network link that is connected to a local network. For example, the communication interface may be an **integrated services digital network (ISDN) card** or a modem to provide a data communication connection to a corresponding type of telephone line. As another example, the communication interface may be a **local area network (LAN) card** to provide a data communication connection to a compatible LAN. Wireless links may also be implemented. In any such implementation, communication interface sends and receives electrical, electromagnetic or optical signals that carry digital data streams representing various types of information.

Blair fails to teach or suggest a removable multi-link service card, as required by claim 51. Perhaps the Examiner misunderstands the difference between a multi-link service card and network interface card. In fact, it appears the Examiner misunderstands a "multi-link service

card" recited by the Applicant's claims to be a card that provides an interface to a multi-link network connection. This is incorrect. As required by claim 51, a service card is a removable card that provides a service (function) for the router. In this case, the multi-link service card provides the function of sequencing data packets that were received by the router using other interface cards. In other words, the interface cards provide the physical network interfaces to the network links for sending and receiving packets, and the router utilizes other removable cards ("service cards") to perform functions (sequencing or prioritization) on those data packets. **Blair describes only interface cards, and fails to teach or suggest a multi-link service card that is a removable card that may be inserted and removed from a network device.** Thus, the Examiner has failed to establish a prima facie case of anticipation with respect to claim 51.

With respect to claims 2, 8, and 16, Blair fails to disclose a multi-link service card that is not directly coupled to any of the links. Applicants are confused with respect to the Examiner's rejections of these claims. In rejecting claim 2, the Examiner cited FIG. 3, 4, col. 4, l. 56-col. 5, l. 9, col. 8, ll. 16-63 and col. 10, ll. 18-85 of Blair. However, FIG. 3 of Blair shows packet decoder 63 directly coupled to link interfaces 61. Further, Blair describes decoder 63 as coupled to the link interfaces 61. Thus, decoder 63 of Blair is indeed directly coupled to the links via the link interfaces. Perhaps the Examiner concludes that decoder 63 is not "directly" coupled to the interfaces because the decoder is coupled to the link interfaces and not the links. However, the only way a decoder could be "directly" coupled to a link is by the use of a link interface. Some form of link interface would be required for directly coupling to an interface. Thus, Blair does not disclose a multi-link service card that is not directly coupled to any of the links, as required by claims 2, 8, and 16.

With respect to claim 6, Blair does not teach prioritizing the data blocks to provide quality of service. Moreover, with respect to claim 18, Blair does not teach prioritizing the data blocks in a multi-link service card at all. It appears that the Examiner has confused "load balancing" with "prioritizing." Load balancing, as described by Blair, uses hashing function of distributing packets over a multi-link bundle. In the portion cited by the Examiner, Blair states:

> "The results of the hash operations for multiple bounded-delay data flows therefore vary in a substantially random manner based on the random information in the packet headers of the different flows ..."

Thus, it appears the load balancing function utilizes hash functions to help ensure throughput of time-sensitive flows. The "random" distribution is not a "prioritization," as required by the Applicants' claims. To the contrary, "randomly" distributing data packets, as described by Blair, is not prioritizing packets based on a quality of service associated with the packets. Thus, Blair fails to describe prioritizing data packet at all, let alone use of a multi-link service card to perform the prioritization.

Claims 19-33

With respect to claim 19, Blair fails to teach or suggest a routing control unit coupled to the interface card and the multi-link service card to forward the set of data blocks to the multi-link service card for sequencing. Similarly, with respect to claim 29, Blair fails to teach or suggest a router comprising a plurality of cards, wherein the cards include a first card for receiving data blocks from a computer network and a second card for sequencing the data blocks, as recited by Applicants' claim 29.

In rejecting claims 19 and 29, the Examiner merely referred to the rejections of claims 1, 7 and 12. However, as described above, Blair merely describes a router having a decoder 63 that segments data packets. Blair is entirely silent with respect to routing control unit that forwards data block to from an interface card a separate and distinct service card for sequencing. Blair provides no teaching or suggestion to use a service card to sequence data packets at all. Blair provides no indication that the sequencing of data packets received by one card is performed by a different card.

With respect to claim 27, Blair fails to disclose a plurality of multi-link service cards. In rejecting claim 27, the Examiner cites FIGS. 3, 4 and col. 10, ll. 24-65, which describe interfaces 61, decoder 63 and reassembly operation 71. However, as discussed above, Blair fails to teach or suggest a multi-link service card distinct from an interface card, let alone a plurality of multi-link service cards. In fact, the fact that Blair describes a single decoder 31 and a single reassembly operation 71 is in direct contrast to the requirement of claim 27 of a plurality of multi-link service cards for sequencing data packets. Applicant requests the Examiner identify support for anticipation of a plurality of multi-link service card that sequence data packets.

In regard to claim 28, Blair fails to teach a router wherein the routing control unit forwards sequenced data blocks to the multi-link service card for fragmentation.

Claims 34-43

The Examiner rejected claim 34 stating that claim 34 is "substantially similar" to claims 1, 17 and 12. Applicants respectfully disagree. Claim 34 requires a multi-link service card for insertion within a network device. Claim 34 further requires that the multi-link service card comprise an electrical interconnection interface for coupling the multi-link service card to the network device, an input logic unit that receives data blocks via the electrical interconnection interface, a sequencer unit coupled to the input logic unit for sequencing the data blocks, and an output logic unit coupled to the sequencer that sends sequenced data blocks.

The Examiner relies on "decoder 63" of Blair in rejecting Applicants' claim 12. However, as described above, Blair merely describes a router having a decoder 63 that segments data packets. Blair is entirely silent with respect to a multi-link service card for insertion within a network device that has a sequencer unit for sequencing the data blocks, as required by claim 34. Blair provides no teaching or suggestion to use a service card to sequence data packets.

Further, with respect to claim 34, Blair fails to teach or suggest a multi-link service card having an electrical interconnection interface for coupling to the network device, and an input logic unit that receives data blocks via the electrical interconnection interface. Blair discloses a "decoder 63" that segments data fragments. Blair does not disclose a multi-link service card as claimed by the Applicants.

Moreover, with respect to claim 42, Blair does not teach prioritizing the data blocks in a multi-link service card at all. As noted above, it appears that the Examiner has confused "load balancing" with "prioritizing."

Claims 50-52

The Examiner rejected claim 50 stating that claim 50 is "substantially similar" to claims 1, 17 and 12. Applicants respectfully disagree. Claim 50 requires receiving data packets in one or more interface cards of a network device, sending the data packets to a service card of the

network device for prioritization, and sending the prioritized data packets to the interface cards of the network device for communication to a destination device over a computer network.

As described above, Blair merely describes a router having a decoder 63 that segments data packets. Blair makes no mention of a service card, let alone sending data packets to a service card for prioritization, as required by claim 50.

Furthermore, Blair does not teach prioritizing the data blocks to provide quality of service. As described above, it appears that the Examiner has confused "load balancing" with "prioritizing." Load balancing, as described by Blair, uses hashing function of distributing packets over a multi-link bundle. The load balancing function of Blair utilizes hash functions to help ensure throughput of time-sensitive flows. The "random" distribution is not a "prioritization," as required by the Applicant's. To the contrary, "randomly" distributing data packets, as described by Blair, is not prioritizing packets based on a quality of service associated with the packets. Thus, Blair fails to describe prioritizing data packet at all, let alone use of a service card to perform the prioritization.

CONCLUSION

In order to support an anticipation rejection under 35 U.S.C. 102(e), it is well established that a prior art reference must disclose each and every element of a claim. This well known rule of law is commonly referred to as the "all-elements rule."[1] If a prior art reference fails to disclose any element of a claim, then rejection under 35 U.S.C. 102(e) is improper.[2]

Blair fails to disclose each and every limitation set forth in claims 1-43 and 50-53. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicants' claims 1-43 and 50-53 under 35 U.S.C. 102(e). Withdrawal of this rejection is requested.

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any

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[1] *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (CAFC 1986) ("[I]t is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention.").
[2] *Id; see also Lewmar Marine, Inc. v. Barient, Inc.* 827 F.2d 744, 3 USPQ2d 1766 (CAFC 1987); *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (CAFC 1990); *C.R. Bard, Inc. v. MP Systems, Inc.*, 157 F.3d 1340, 48 USPQ2d 1225 (CAFC 1998); *Oney v. Ratliff*, 182 F.3d 893, 51 USPQ2d 1697 (CAFC 1999); *Apple Computer, Inc. v. Articulate Systems, Inc.*, 234 F.3d 14, 57 USPQ2d 1057 (CAFC 2000).

additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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